# Thread Rolling Die Ø30 Z6

**A21-600**

The thread rolling die is ground with conventional wheels for 2 reasons: it allows to change the thread geoemtry, lead and form, fast and ecomomically by simply changing the wheel-DXF and redress the new geometry on the same wheel, and for thin threads the wheel can be kept sharp as being redressed when needed. Pregrinding could eventually be done with a V-shaped CBN wheel to increase grindingefficiency.
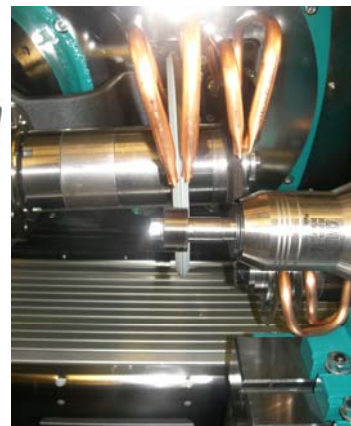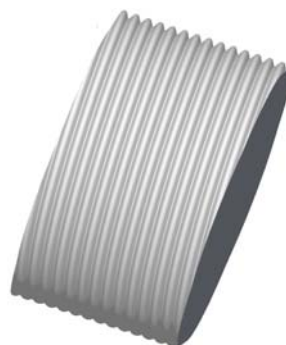
## 1. Cycletime for Production

| Tool specifications | | | | | | | |
|---|---|---|---|---|---|---|---|
| Diameter 30 mm, Z 6, Length of cutting edge 17 mm, Helix angle 86.35º | | | | | | | |
| Material HSS | | | | | | | |
| Operations | Dress | Thread Pregr | Thread fin 1 | Dress | Thread fin 2 | Dress | Thread fin 3 |
| Feed [mm/Min] | 100 | 300 | 800 | 100 | 800 | 100 | 800 |
| Power [kW] | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cutting feed [m/s] | 24 | 42 | 42 | 24 | 42 | 24 | 42 |
| Used wheels | 33 | 33 | 34 | 34 | 34 | 34 | 34 |
| Grinding time [s] | 246 | 451 | 216 | 84 | 216 | 78 | 216 |
| Total cycle time | 25 Min 4 | | | | | | |

The mentioned cycle times are indicative. The material to be ground, different grinding wheels or other coolants can influence the cycle times considerably.

## 2. Used Grinding Wheels

| 33 | DXF Ø150 C90 |
|---|---|
| 34 | DXF Ø200 C200 |

34 33
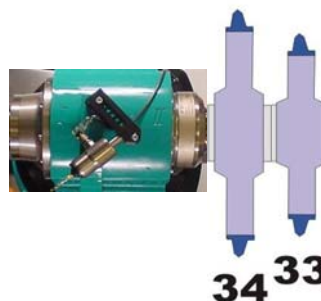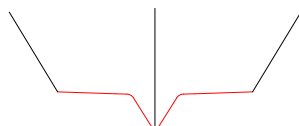
## 3. Machine and Software Requirements

Machines:        5 axes CNC grinders : GEMINI DMR
Control:          Fanuc 31i
Coolant:          Synthetic Oil, pressure 6bar
Software:        Quinto 5

responsible engineer:          OP,5.1.09

**TECHNOLOGY FOR TOOLING**